What's *new* with the *old* drug Aspirin in *older* adults?

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The benefit-to-harm balance of aspirin has been further questioned recently. What should prescribers do? The European Society of Cardiology (ESC) Guidelines, most recently updated in 2016 [1], do not recommend the use of aspirin for primary prevention (patients without prior major cardio- or cerebrovascular event) due to the high risk of bleeding. This position is now further supported by the results of the Aspirin in Reducing Events in the Elderly ASPREE trial [2]. Aspirin significantly increased the risk of major haemorrhage without lowering the risk of cardiovascular disease, compared to placebo.

In the BJCP/Journal, Ardoino and colleagues found high rates of prescription of antiplatelet drugs (with aspirin being the most frequently chosen): almost half (43.6%, 95% CI 41.5-45.7) of 959 patients aged 65 or over in Italian and Spanish internal medicine and geriatric wards in 2012 and 2014 (as part of the REPOSI ((REgistro POliterapie SIMI)) register) [3]. Moreover, just over half (52.1%) were prescribed aspirin inappropriately. In most cases, this was over-prescription (74.2%) in patients with a Systematic Coronary Risk Evaluation Project (SCORE) <10%. Against this over-prescription of aspirin for primary prevention, Ardoino et al., also found substantial under-prescription (30.6%) of antiplatelet agents in patients who were secondary prevention [3].

Ardoino et al., also found further inappropriate use of antiplatelets in patients with atrial fibrillation (AF) - who should have been anticoagulated.

The risks of major bleeding and stroke with aspirin and anticoagulants used for AF has been reported in the Journal by Gieling et al., who studied their use in 31,497 patients with AF (2008-2014) using the UK Clinical Practice Research Datalink [4]. Aspirin was found to have a similar bleeding risk to vitamin K antagonists (VKAs) but that VKAs were more effective than aspirin (hazard ratio (HR) 2.18, [95% confidence interval (95%CI) 1.83-2.59) in the prevention of ischaemic stroke. Whilst Nonvitamin K antagonist oral anticoagulants (NOACs) were similarly effective as VKA in preventing ischaemic stroke (HR 1.22, 95% CI 0.67-2.19), they were associated with double the risk of major bleeding – mainly gastrointestinal [2.07 (95%CI 1.27-3.38)], a risk restricted to women (HR 3.14, 95% CI 1.76-5.60). However, caution should be applied as this was a retrospective cohort study, albeit in a large population.

Despite this poor benefit-to-harm balance of aspirin, Parekh et al., found that anti-platelets agents were only 13th on a list of medications associated with medication-related harms (MRH) following hospital discharge in 1280 older adults [5]. Aspirin was behind opiates, antibiotics, benzodiazepines, diuretics and antihypertensives. The overall incidence of MRH-associated hospital readmission was ~8% (78 per 1000 discharges), at an estimated cost to the National Health Service of £396 million annually, over 60% of which (£243 million) was considered to be potentially preventable [5].

Therefore, whilst prescribers should remember the need for antiplatelets in secondary prevention, they should reconsider the use of aspirin for primary prevention and focus more on good control of the other risk factors: blood pressure and cholesterol (the latter mainly via use of statins). Perhaps the current success of these other interventions now leaves little room for benefit from aspirin in primary prevention?

References

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